

Practice Test Math 6 Unit 1

NAME: Answer Key

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#1

The pattern rule that relates the input to the output is:
Divide the input by 3, then add 2.

Find the missing numbers in the table.

Input	Output
3	3
6	? 4
9	? 5
12	6
15	? 7
? 8	8

4

How can you check your answers?

Check pattern, use pattern rule when you know input when you know output work backwards using inverse operations: subtract 2 then multiply by 3

#2 Write an expression with a variable to represent each patten rule: Let n represent the input.

a) Multiply the input by 4 then subtract 1 $4n - 1$

b) Divide the input by 3 then add 2 $n \div 3 + 2$

c) Multiply the input by 5 then add 3 $5n + 3$

3

#3 write an expression with 2 numbers and one operation to balance each equation

a) $4 \times 6 = 12 + 12$

c) $16 \div 4 = 2 + 2$

b) $12 - 6 = 3 \times 2$

d) $4 + 3 = 9 - 2$

4

#4 Rewrite each expression using a commutative property

a) $4 \times 6 = 6 \times 4$

b) $13 + 24 = 24 + 13$

12

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#5

The table shows the input and output from a machine with two operations.

Input	Output
5	15
10	40
15	65
20	90
25	115

a) Identify the numbers and the operations in the machine.

$\times 5 - 10$

30	140
35	165
40	190
45	215

b) Choose 4 different input numbers.
Find the output for each input.

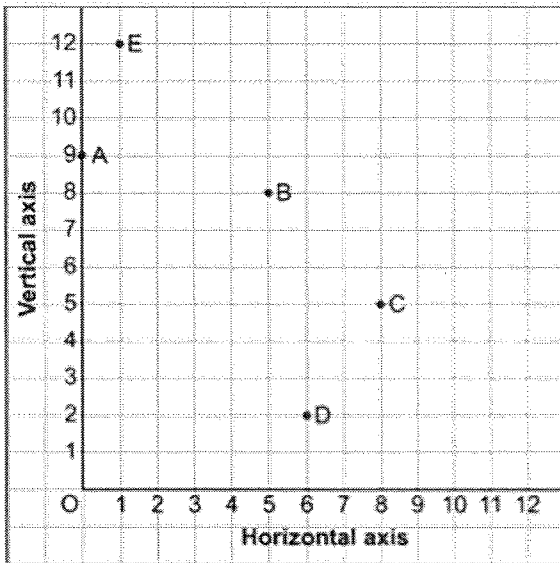
c) Write the pattern rule that relates the input to the output.

Multiply input by 5, then subtract 10

d) Predict the output when the input is 60. Check your prediction.

290 $60 \times 5 = 300$ and $300 - 10 = 290$

List the coordinates of each point on the grid.



A: (0, 9)

B: (5, 8)

C: (8, 5)

D: (6, 2)

E: (1, 12)

4

15

9

#7

Janine wants to have helium-filled balloons delivered to the home of a sick friend. Each balloon costs \$4. Delivery costs \$5.

a) Make a table to show the cost of having 1, 2, 3, and 4 balloons delivered.

# Balloons	Cost(\$)
1	9
2	13
3	17
4	21

b) Write a pattern rule that relates the number of balloons to the total cost.

multiply # of balloons by 4, then add 5

c) Write an expression with a variable to represent the pattern.

$$4n + 5$$

d) Find the cost of having 9 balloons delivered.

How can you check your answer?

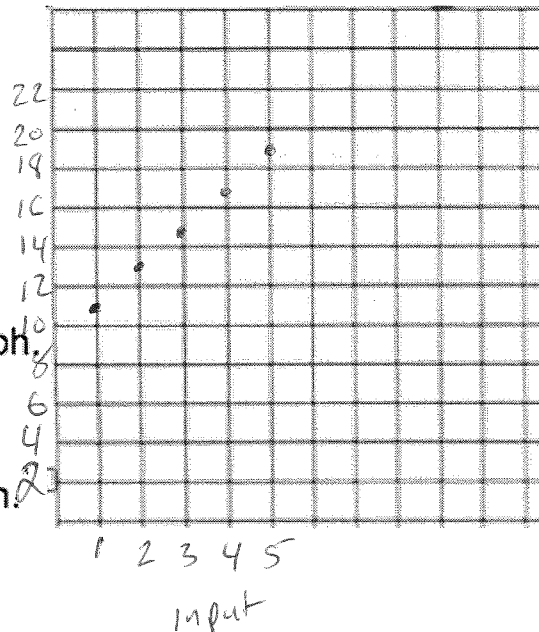
$$\$41 \quad 4 \times 9 = 36 + 5 = 41$$

#8

Use grid paper.

a) Graph the data in the table.

Input	Output
1	11
2	13
3	15
4	17
5	19



b) Describe the relationship shown on the graph.

when input increases by 1, output increases by 2

c) Write an expression to represent the pattern.

$$2n + 9$$